

CLAIMS:

1. A method of manufacturing a semiconductor device, wherein a surface of a silicon body is provided with an auxiliary layer of a material on which, during an oxidation treatment, a thicker layer of silicon oxide is formed than on the silicon of the silicon body, after which, at the location of field isolation regions to be formed, windows are formed in the auxiliary layer and grooves are formed in the surface of the silicon body, whereafter an oxidation treatment is carried out wherein the walls of the grooves and of the windows are provided with a layer of silicon oxide, but wherein it is precluded that the auxiliary layer adjacent to the windows is oxidized across the entire thickness, after which, successively, a layer of isolating material is deposited in a thickness such that the grooves and the windows are filled completely, a planarization treatment is carried out until the non-oxidized part of the auxiliary layer is exposed, after which this part of the auxiliary layer is removed, characterized in that a layer comprising silicon and germanium is applied as an auxiliary layer to the surface of the silicon body.
2. A method as claimed in claim 1, characterized in that on the surface of the silicon body a layer of $\text{Si}_x\text{Ge}_{1-x-y}\text{C}_y$, where $0.70 < x < 0.95$ and $y < 0.05$, is provided as the auxiliary layer.
3. A method as claimed in claim 1 or 2, characterized in that the auxiliary layer is applied in a thickness such that this layer is not converted across the entire thickness into an oxide during the oxidation treatment.
4. A method as claimed in claim 1 or 2, characterized in that a layer of silicon nitride is applied to the auxiliary layer, the windows being formed in the layer of silicon nitride as well as in the auxiliary layer.
5. A method as claimed in claim 1, 2, 3 or 4, characterized in that prior to applying the auxiliary layer to the surface of the silicon body, this surface is provided with a layer of silicon oxide, and the windows are also formed in the layer of silicon oxide.